REMARKS

Claims 64-68 are added herein. Upon entry of this amendment, claims 12, 14-17, 24-29, 31-36, 38-41, 50-51 and 53-68 will be pending. Applicants acknowledge that claims 18, 30, 37 and 42-49 are withdrawn from consideration.

Acknowledgment of Allowed/Allowable Claims

Applicants acknowledge that claims 51 and 57-58 are allowed and claims 14-16, 25-28, 32-35 and 39-40, 53-56 and 61-63 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. The Office action incorrectly listed claims 57-58 as "objected to", but the Interview Summary mailed March 26, 2004 states that claim 57 is allowed. Presumably, claim 58 is also allowed because it depends from claim 57 and was not rejected.

Rejections Under 35 U.S.C. § 102

Rejection over Andresen

Claim 12 is again rejected as anticipated by U.S. Pat. No. 4,705,616 (Andresen). Claim 12 is directed to a sampling probe comprising, in pertinent part:

a) an inner body and

b) an outer body having an inner cavity sized and shaped for receiving the inner body,

c) a tip for engaging the substrate, and

d) a **resiliently compliant element connecting the tip to the inner body and permitting the tip to move relative to the inner body.**

Claim 12 is patentable over Andresen for the reasons discussed in the Remarks section of Amendment E. Additionally, applicants emphasize that Andresen's molecular screen 74 between washers 75 (screen assembly) is **not** a resiliently compliant element connecting the tip to the inner body, as maintained by the Examiner. **Andresen does not state, or even suggest, that the screen assembly is resiliently compliant**. Andresen states that "[t]he screen assembly 72 is pressed against the face or end of block 56 by retaining plug 57 being threaded into casing section 55 to produce a tight compression fit therebetween." (Figure 6 and col. 11, line 48 through col. 12 line 4). This statement does not mean that the screen assembly is resilient, but rather, that a compression fit is formed. Thus, Andresen does not show or suggest the resiliently compliant element, and Andresen cannot anticipate the claim. For these reasons and for the reasons discussed in Amendment E, the rejection of claim 12 is in error and should be withdrawn. Dependent claims 17 and 59 are submitted as patentable over Andresen for the same reasons as claim 12.

Amended claim 24 recites a probe comprising, in pertinent part, a tip, a body and a resiliently compliant element connecting the tip to the body. To the extent claim 24 corresponds to claim 12, claim 24 is submitted as patentable for the same reasons as claim 12. Also, claims 29 and 60 depend from

claim 24 and are submitted as patentable for the same reasons as claim 24.

Rejection over Meuzelaar

Referring to Section 4 of the rejection, claim 12 is also rejected as anticipated by U.S. Pat. No. 4,408,125 (Meuzelaar). However, Meuzelaar does not show or suggest the claimed reactant delivery passage extending through the probe to an outlet at the tip.

Meuzelaar generally comprises a modular pyrolysis inlet 10 comprising a probe 12, a vacuum housing 18, a pyrolysis chamber housing 20 and a mass spectrometer inlet housing (Figure 1). In more detail and referring to Figure 2 of Meuzelaar, the probe includes a probe shaft 14 received in a housing 16. (Col. 5 line 66 - col. 6 lines 1-50). A second telescoping member 13 is formed at the end of the probe shaft for receiving a first telescoping member 11. A spring 50 is disposed between the first and second telescoping members for allowing movement of the probe shaft/second telescoping member. A bolt 44 extends through the spring and is fixed to the probe shaft 14 and first telescoping member 11. A wire 82 having the sample thereon is fixed to the bolt via a holder 76 and is disposed to extend into a reaction chamber 80. Note that the wire 82 is contacted with a prepared sample to be analyzed prior to insertion of the probe into the reaction chamber. (Col. 8, lines 36-56). A minute amount of the prepared sample adheres to the wire and is thereafter heated. A heating mantle 94 including a filament 96 is disposed around a heated portion of the chamber 80 for heating the sample to pyrolysis temperatures. (Col. 6, lines 51-64). A high frequency coil 92 is also disposed around the chamber 80 for emitting high frequency radio waves to the wire 82. (Col. 7, lines 5-18). In operation, the probe shaft is moved to the right (as shown in Figure 2) to overcome the resistance of spring 50 and thereby cause the wire 82 to move further into the heated portion of the reaction chamber 80. (Col 9, lines 27-48). The pyrolysis

products exit through outlet 86 into expansion chamber 102 and thereafter through expansion chamber 102.

The Examiner asserts that Meuzelaar's high frequency coil 92 is equivalent to the claimed resiliently compliant element. However, the coil does not connect a tip to an inner body as claimed. Meuzelaar states that the coil is "wound around the periphery of heating mantle 94" and that current through the coil causes the coil to emit high frequency radio waves. (Col. 7, lines 5-32). Meuzelaar does not state that the coil connects one member to another. Moreover, the rejection does not indicate what portion of Meuzelaar is equivalent to the claimed "inner body." In any event, Meuzelaar's coil is not an equivalent to the claimed resiliently compliant element because it does not connect one member to another, much less a tip to a body. Rather, the Meuzelaar coil merely emits radio waves. Further, Meuzelaar does not show or suggest that the coil is resiliently compliant. Thus, the rejection is in error for several reasons and should be withdrawn.

Additionally, functional recitations such as "for engaging a substrate" and "sized and shaped for receiving a reaction product," must also be considered by the Examiner. The MPEP and the case law make clear that functional limitations must be evaluated and considered, just like any other limitation of the claim, for what the limitation fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used. MPEP § 2173.01. Merely dismissing the recitations as "method limitations" is improper. However, regardless of whether the functional recitations are considered, the rejection is incorrect for the reasons given above with respect to the resiliently compliant element. For these reasons, and for the reasons discussed in Amendment E, claim 12 is submitted as patentable over Meuzelaar.

Dependent claims 17 and 59 are submitted as patentable over Meuzelaar for the same reasons as claim 12.

To the extent claim 24 corresponds to claim 12, claim 24 is submitted as patentable over Meuzelaar for the same reasons as

claim 12. Also, claims 29 and 60 depend from claim 24 and are submitted as patentable for the same reasons as claim 24.

Claim 31 remains rejected as anticipated by Meuzelaar, even though the Examiner withdrew the rejection of claim 31 over Beer. Meuzelaar is no more relevant to claim 31 than Beer, and the rejection over Meuzelaar should also be withdrawn. Claim 31 is directed to a sampling probe comprising among other things:

a) **a recess in the tip** sized and shaped for receiving at least a portion of the reaction product,

b) a reaction product sampling passage extending from the recess,

c) a reactant delivery passage extending to **an outlet positioned at an exterior of the tip** for delivering reactant to the substance on the substrate to form the reaction product, and

d) wherein **the tip includes at least one opening separate from the sampling passage permitting reactants to flow from the exterior of the tip into the recess when the tip contacts the substrate.**

Meuzelaar, like Beer, does not anticipate claim 31 because the reference does not show a tip including at least one opening separate from the sampling passage permitting reactants to flow from an outlet at an exterior of the tip into the recess when the tip contacts the substrate. Meuzelaar does not show an outlet at an exterior of the tip, nor an opening separate from the sampling passage permitting reactants to **flow from the exterior of the tip into the recess when the tip contacts the substrate** as recited in claim 31. An exemplary opening in the tip permitting reactants to flow into the recess is shown in Fig. 4 and is described as "groove 262" at page 15, lines 4-7 of the substitute specification. The groove or opening increases flow under and through the tip when the tip contacts the substrate. The Examiner asserts that Meuzelaar's walls 42 are equivalent to the claimed tip, the claimed "outlet" is at 108, and its sampling passage is 102. The Examiner does not specify exactly what part

of Meuzelaar is the "recess." In any event, Meuzelaar's **"tip", like Beer's, is not adapted to contact a substrate, and more importantly, does not have an opening separate from any sampling passage permitting reactants to flow into the recess when the tip contacts the substrate.** Accordingly, claim 31 is patentable over Meuzelaar for similar reasons as Beer. Claims 36 and 50 depending from claim 31 are submitted as patentable for the same reasons as claim 31.

Additionally, claim 50 recites that the "at least one opening" is a groove formed in the tip. The Examiner made no finding as to what part of Meuzelaar is equivalent to the claimed groove, and there appears to be no such groove in Meuzelaar.

Rejection over Weinberg

Referring to Section 3 of the rejection, claim 38 is rejected as anticipated by Weinberg. Claim 38 is directed to a sampling probe comprising, among other things:

a) a reactant delivery passage extending to an outlet positioned at the tip for delivering reactant to the substance on the substrate; and

b) an overflow vent passage **positioned in the body to remove excess reactant before said excess reactant reaches the outlet for optimizing contact time between the reactant and the substance.**

Claim 38 is patentable over Weinberg because the reference fails to show an overflow vent passage positioned in the body to remove excess reactant before said excess reactant reaches the outlet for optimizing contact time between the reactant and the substance. **The recitation "positioned in the body" is not merely a statement of "intended use."** Rather, the recitation requires the overflow vent passage be **positioned in the body** to remove excess reactant. Clearly, such a recitation is more than a statement of "intended use" because it requires a certain position in the body. Accordingly, the recitation must be considered by the Examiner. As described in more detail in Amendment E, Weinberg fails to show an overflow vent passage

positioned in the body to remove excess reactant before said excess reactant reaches the outlet. In Weinberg, any excess reactant would have to flow out through the outlet opening at the tip before it could reach the annular opening 1004. In contrast, applicants' claim is directed to an overflow vent passage in the body which allows for higher reactant flow rates and which removes excess reactant before the excess reactant reaches the outlet. Weinberg fails to show the claimed construction and claim 38 is, therefore, patentable over Weinberg.

Claim 41 depends from claim 38 and is submitted as patentable for the same reasons as claim 38.